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DOE to Pursue Zero-Net Energy Commercial Buildings

National Renewable Energy Laboratory Announces Support for Clean Tech Open

PALO ALTO, Calif. - U.S. Department of Energy (DOE) Deputy Assistant Secretary for Energy Efficiency David Rodgers today announced the launch of DOE's Zero-Net Energy Commercial Building Initiative (CBI) with establishment of the National Laboratory Collaborative on Building Technologies (NLCBT). These two efforts both focus on DOE's ongoing efforts to develop marketable Zero-Net Energy Commercial Buildings, buildings that use cutting-edge efficiency technologies and on-site renewable energy generation to offset their energy use from the electricity grid, by 2025. The announcement was made at the California Clean Tech Open, a competition that supports innovative and sustainable new businesses which focus on energy efficiency, smart power, renewable energy, transportation, green building technologies, pollution control and resource management. DOE's National Renewable Energy Laboratory (NREL) will help sponsor the 2008 California Clean Tech Open, a business plan competition that supports the development of clean technology companies.

"DOE's Commercial Building Initiative and the Collaborative are urgently needed to accelerate innovation and market adoption in the field of high performance buildings," said Deputy Assistant Secretary Rodgers. "Now we are bringing to bear the unprecedented collaboration in scientific resources of five National Laboratories to bring about the needed transformation of the built environment, lower our carbon footprint in buildings and accelerate commercial deployment of clean, efficient building technologies."

In 2005, commercial buildings used 18 percent of energy in the United States, accounting for 18 percent of greenhouse gas emissions. The Zero-Net Energy CBI strives to make new commercial buildings capable of generating as much energy as they consume available by 2025. Energy generation will be achieved through advanced energy efficiency technologies and on-site renewable energy generation systems, such as solar power and geothermal energy.

The Energy Independence and Security Act of 2007 (EISA 2007), signed by President Bush in December 2007, authorizes the Department to collaborate with the private sector, DOE's National Laboratories, other federal agencies, and non-governmental organizations to advance high-performance commercial green buildings. DOE's Building Technologies Program will support High Performance Green Building activities in EISA 2007, including:

- Technology research and development;
- Sponsorship of pilot and demonstration projects across multiple climate zones;
- Provision of technical assistance to encourage widespread technology adoption;
- Development of training materials and programs for builders;
- Public education on the need for efficiency in new and existing buildings;
- Work with code-setting bodies to ensure technologies are properly deployed;
- Analysis of incentives for builders, landlords, and tenants to ensure that cost-effective investments are made on a life-cycle basis; and,

• Development of a means for measurement and verification of energy savings.

To help fulfill these responsibilities, the Department will use the intellectual and scientific resources of DOE's National Laboratories: Argonne National Laboratory, Lawrence Berkeley National Laboratory, National Renewable Energy Laboratory, Oak Ridge National Laboratory, and Pacific Northwest National Laboratory. This new NLCBT will enable the labs and DOE to work closer on research, validation, and commercialization priorities critical to the success of zero-net energy buildings.

NREL, in its capacity as a DOE-sponsored national laboratory, is providing \$100,000 to the California Clean Tech Open on behalf of the DOE/ NLCBT to facilitate initiation and development of a green buildings award category under the competition.

The High-Performance Green Building activities laid out in EISA 2007 represent an extension of DOE's existing accomplishments in building research, development, and deployment – including partnerships with American Society of Heating, Refrigerating and Air-Conditioning Engineers; Illuminating Engineering Society of North America, U.S. Green Building Council; and the American Institute of Architects to develop Advanced Energy Design Guides for 30 percent Energy Savings, more than 110,000 copies of which have been distributed through DOE's partners.

To learn more about DOE's Energy Efficiency and Renewable Energy programs in buildings, visit http://buildings.energy.gov

For more information on the California Clean Tech Open, visit http://www.CleanTechOpen.com